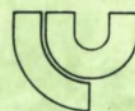Regional Co-operation in Scientific
Information Exchange in the Western
Indian Ocean Region
(RECOSCIX-WIO)

Kenya Marine and Fisheries
Research Institute

Limburg University Centre

Intergovernmental
Oceanographic Commission

RECOSCIX-WIO
ANNUAL REPORT

1993

VLIZ (vzw)
VLAAMS INSTITUUT VOOR DE ZEE
FLANDERS MARINE INSTITUTE
Oostende - Belgium

CONTENTS

I. GENERAL INFORMATION

1. Period covered by report: 1 January 1993 to 31 December 1993

2. Project identification:
   Name: **Regional Co-operation in Scientific Information Exchange in the Western Indian Ocean region (RECOSCIX-WIO)**
   Country: **Kenya**

   Co-ordinating institution: **Limburg University Centre (LUC)**
   Universitaire Campus
   3590 DIEPENBEEK (Belgium)
   tel: (32 11) 268121
   fax: (32 11) 268126

   Belgian Project Director: **Prof. Dr. L. EGGHE**, Chief Librarian LUC

   Partner institution: **Kenya Marine and Fisheries Research Institute**
   P.O. Box 81651
   MOMBASA (Kenya)
   tel: (254 11) 475570-4
   fax: (254 11) 472215

   Kenyan Project Director: **Dr. E. OKEMWA**, Director KMFRI

3. Duration: 4 years (with prolonged first year);
   start: 1 August 1991; foreseen end date: 31 December 1995

II. PROJECT INPUT

A. Through funds of the Belgian Government

The Belgian project funding is administered by the General Administration for Development Co-operation (GADC = ABOS : Algemeen Bestuur voor Ontwikkelingssamenwerking). Apart from the project funds, an expert is provided through the Flemish Association for Development Co-operation and technical Assistance (VVOB : Vlaamse Vereniging voor Ontwikkelingssamenwerking en technische Bijstand).

1. Finances
   - Total allowance: BFr 14,464,012 (US$ 399,558)
   - Annual allowances: year 1: BFr 7,895,738 (US$ 218,114)
                         year 2: BFr 2,827,088 (US$ 78,096)
                         year 3: BFr 1,886,482 (US$ 52,113)
                         year 4: BFr 1,854,704 (US$ 51,235)

   The budget allocation over the years and headings is given in Annex 1.

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2. Personnel
  - Expert on site: Dr. Peter REYNIERS, project manager, with a VVOB contract from 9 January, 1992, to 8 January, 1994
  - Visiting expert: Dr. Egbert DE SMET, research assistent of the Department Political and Social Sciences of the University Institution Antwerp (Belgium), who was in Kenya between 8 and 20 Juli, 1993, to check and adjust the installation of the CDS/ISIS software on the UNIX server in the RDC and for a short training of the technical manager (see Annex 8).
  - Co-ordination visit: Prof. Dr. Leo EGGHE, Chief Librarian LUC, part-time Professor at the University Institution Antwerp, 8 to 20 July, 1993 (see Annex 7).

3. Funds for operation costs

The following subdivisions are also used as headings in the financial report in Table I and in the budget overview in Annex 1.

  - Telecommunication: telephone, telefax, electronic mail (OMNET and GreenNet), information retrieval from DIALOG databases
  - Mailing, including courier services and distribution of newsletter WINDOW
  - Reproduction: printing of newsletter WINDOW
  - Computer: consumables and maintenance
  - Periodicals: starting from 1992 the project is subscribed to the following periodicals through project funds:
    + Bulletin of Marine Science
    + Current Contents - Agriculture, Biology and Environmental Sciences
    + Indian Journal of Marine Sciences
    + Journal of the Marine Biological Association of the United Kingdom
    + Limnology and Oceanography
    + Mahasagar
    + PSZNI - Marine Ecology
    + Nature
    + Science
  - Document delivery through the Belgian co-ordinating institution: interlibrary lending requests through the LUC (see Annex 4 for further details)
  - Document delivery through other libraries than the LUC (for statistics: see Annex 4)
  - Personnel: regional and international travel for RDC staff
  - Visits: 1 visiting expert and the Belgian project director
  - Training: the internships planned for the first year were started during the second year and will continue during the third year

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TABLE 1. FINANCIAL OVERVIEW OF THE SECOND YEAR OF THE PROJECT (IN BFR)

	RECEIPTS	EXPENSES	BALANCE
1. Equipment			
Photocopier			
Software			
Hardware		189,034	- 189,034
Total/year		189,034	- 189,034
2. Operation costs			
Telecommunication	349,440	311,662	37,778
Mailing	128,000	99,589	28,411
Reproduction	160,000	95,107	64,893
Computer consumables	160,000	194,290	- 34,290
Periodicals	52,500	0	52,500
Doc delivery Belgium	600,000	352,160	247,840
Doc delivery (other)	350,000	144,379	205,621
Total/year	1,799,940	1,197,187	602,753
3. Personnel			
Regional travel		78,306	- 78,306
International travel		13,891	- 13,891
Total/year		92,197	- 92,197
4. Visits			
Co-ordinator per diem	76,734	74,864	1,870
Expert per diem			
Travel	55,000	86,531	- 31,531
Total/year	131,734	161,395	- 29,661
5. Training			
Internships	256,000	64,490	191,510
Travel	80,000	39,948	40,052
Workshop	350,000	0	350,000
Total/year	686,000	104,438	581,562
Administration	104,707	62,963	41,744
Sundry	104,707	48,988	55,719
GRAND TOTAL/year	2,827,088	1,856,202	970,886

B. Input by the Kenyan partner institution

1. Personnel

- Dr. Peter REYNIERS: general project manager (see also II.A.2; general management of the RDC and tasks taken from the scientific manager: management of information services; co-ordination of WIODIR and WIOLIB; edition of newsletter; contacts with the nodes of the co-operation; participation in meetings relevant to the project)
- Mr. Mika O. ODIDO: scientific manager (due to prolonged training abroad, surgical operation and other commitments Mr. Odido could not spend much of his time with the project)
- Mr. Sam O. NG'ETE: technical manager (management of the computer system; training and assistance on computer related matters in the co-operating institutes; technical aspects of WIODIR and WIOLIB; DTP of newsletter; participation in technical meetings relevant to the project)
- Mr. Kennedy O. ONYANCHA: librarian (bibliographic information retrieval; follow-up of document requests; WIODIR and WIOLIB database maintenance; Mr. Onyancha joined the project in June and is in training)
- Ms. Phyllis C. MUTERE: secretary (administration of correspondence and mailing of document requests; data input in WIOLIB)
- Ms. Catherine M. KAUMBUTHU: input staff (input in WIOLIB database; Ms. Kaumbuthu was trained in cataloguing during the August 1992 workshop. After temporary transfer to Nairobi she was reassigned to the project in September as full-time input staff)
- Mr. Michael M. MOSOTI: library assistant (processing of document requests)
- Mr. Steve WANJAU: photocopier
- Mr. Willy MWANGI: messenger and assistant photocopier

2. Infrastructure

Two offices, a photocopying room, store room and toilet (all together approximately 120 sq. m; the rooms form a unit and before were guest rooms on top of the institute)

C. External contributions

The secretary of the project received a grant from the Intergovernmental Oceanographic Commission of UNESCO (IOC of UNESCO) for a one month's French course with the Alliance Française in Paris.

As in previous years the project was donated books and volumes of periodicals by libraries abroad. Even if they are secondhand material, they are of great benefit to the project that is able to fill an increasing number of requests from its own collection (see Annex 4).

The project also obtained a set of 5 CDs with physical oceanography data free from the Jet Propulsion Laboratory (NASA).

III. ACTIVITIES AND RESULTS

1. Training

Training of librarians and documentation officers from co-operating institutes was provided through internships in the Regional Dispatch Centre (RDC) in Mombasa. This programme is as well a follow-up of the August 1992 workshop through cataloguing under supervision, as an acquaintance with the daily activities in the RDC.

Ms. Edna Nyika, documentation officer in the Institute of Marine Sciences (Zanzibar) was in the RDC from 15 till 26 November, followed from 29 November till 10 December by Messrs. Salomon Shilamala (University of Nairobi, Chiromo Campus Library) and Godfrey Mioru (University of Mairobi, Main Library). The coming of Mrs. Alice Samuel (Instituto Investigacao Pesqueira, Maputo, Mozambique) was prohibited by administrative problems in Mozambique during the last phase of the preparation to travel.

The interns' activities mainly consisted of input in the WIOLIB (MIBIS) of periodical articles and books, assigning keywords from the ASFA thesaurus, i.e. activities they have to perform in their institutes as a contribution to the project (as well as to the development of their library of course). Special attention went to the PASCAL programme for global change of records, i.e. a programme that allows to put the same field content in a series of selected records. This method is time saving and assures the consistency of input in analytical descriptions.

Mr. Salim Lawi, library assistant of the KMFRI station in Kisumu, came to Mombasa for training from 21 June to 20 August. The Kisumu library holds a large number of interesting publications, but lacks an up-to-date catalogue. A computer was available for automated catalogue development, but Mr. Lawi had no computer knowledge at all. During his stay in Mombasa Mr. Lawi got a training in the following topics: basics of informatics and computer use; introduction to application software, in particular database management; CDS/ISIS; input in MIBIS; typing (with a typing tutorial). The practise was aimed at cataloguing of books, as this material forms the larger part of the Kisumu library holdings.

2. Services, public relations and follow-up

The objectives of the RECOSCIX-WIO project are information provision and exchange, as well within the Western Indian Ocean region, as between the region and the rest of the aquatic sciences community.

The project is a co-operation of institutions for marine/aquatic sciences and fisheries in 8 countries along the East African coast and the island states (see list in Annex 2). A distinction is now being made between **associated institutes**, i.e. institutes (and scientists) that only make use of the project's information services, and **co-operating institutes**, i.e. institutes that also contribute to the project's objectives through delivery of data for the collective catalogue. Due to internal difficulties in Eritrea, Ethiopia and Somalia there have been no contacts with the institutes in those countries in the past year either.

The information provision to the scientists in the region mainly consists of scientific literature. The project also gathers data on the region that can be of interest to the scientists within the region as well as the ones abroad. The promotion of the project is essentially based on its newsletter.

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2.1. Information provision

The first part of the information provision process consists of **information retrieval**. The project uses two instruments to reply to the demand of scientific literature references. It obtained the database Aquatic Sciences and Fisheries Abstracts (ASFA) on CD-ROM through a donation by NOAA (National Oceanic and Atmospheric Administration, U.S.A.) in 1990. This information source may be supplemented with more recent data from databases accessed through DIALOG Information Services. In 1993 there were 112 searches, resulting in 11,598 document citations sent to the requesting researchers. This was an increase by 33% compared to the results of 1992 (see table II). The number of citations per request was also higher: 103.55 for 1993 and 76.55 in 1992. Yet the same policy regarding the quality of the result was maintained: if the number of citations was high enough, the results were limited to English literature (for English speaking scientists), unless the researcher has expressed his knowledge of other languages. In the past year however, there were some requests for extended literature overviews on specific topics. And the information retrieval is a task for a new staff member, who is still learning to increase the precision of his searches (this will result in a decrease of retrieved citations).

The table in Annex 3 offers a detailed overview of the number of requests per month and per institute for the year 1993. The external persons to receive services are visitors to the institute.

Table II. Overview of literature searches in the past years

	1990	1991	1992	1993
Number of searches	149	61	84	112
Number of citations	12,575	5,150	6,430	11,598
Number of citations/search	84.40	84.43	76.55	103.55

Scientists are provided with (copies of) publications through the **document delivery service**. Once they have made their selection from the list of citations resulting from a literature search, or citations they found in other publications, they send their document requests to the Regional Dispatch Centre (RDC) in Mombasa. To fill these requests the RDC relies on the collaboration of some twenty co-operating libraries around the world (mainly America and Europe). The received documents - mostly copies of journal articles - are copied before they are sent to the scientists. That way the "original" copy remains in the RDC for future reference, in case another request for the same document is received. The RDC is also capable of filling an increasing part of the requests from its own collection, grown from the donations.

A detailed overview of the document delivery service is given in Annex 4.

In 1993 the **current awareness** was continued: since 1992 the project is subscribed to a number of periodicals, namely the ones for which there were most requests received in the period 1990-1991 and that were affordable within the project budget. Periodically the contents tables of the recieved issues are copied and sent to the institutes in the region, so that the scientists can make a choice from the most recent literature available in the RDC. Also the RDC is subscribed to Current Contents - Agriculture, Biology and

Environmental Sciences. Each issue is screened for articles of potential interest to the scientists in the region and reprints are requested from the authors. There is a good reply and not seldomly the authors send more than the requested material: in 1993 506 reprints were requested and 806 were received.

2.2. Collection of information

The first gathering of information on the region is the **WIODIR**, a directory of aquatic and fisheries scientists. The computer database contains data of practical (name, studies, place of work, how to be reached) and scientific (research topic) nature and is regularly updated. Due to circumstances only one of the half-yearly organised updates was carried out. Moreover in October 1993 the IAMSLIC (International Association for Marine Sciences Libraries and Information Centers) proposed a new standard for directory databases. The WIODIR will be adapted to this new structure before further distribution. It will also be expanded with experts in other fields beside the current ones, because of an increasing interest in coastal zone management, that involves more areas but mere marine sciences.

The **WIOLIB** is becoming the collective catalogue of the libraries of the co-operating institutes in the region. The August 1992 workshop in automated library management and the supply of computer equipment to the institutes that sent a participant, served this purpose. The contributions of the co-operating institutes are coming in slowly and need further to be stimulated by the internship programme. Yet the database already contained over 4100 records at the beginning of 1994.

2.3. Public relations

The newsletter **WINDOW** is an important instrument to promote the project. It includes articles and general information of interest to the scientists in the region, but also information on the region for the aquatic scientists all over the world: announcements and reports of meetings, congresses..., training opportunities, information on projects and research, activities concerning the project... It has to be noted however that more contributions from the institutes in the region would still increase the usefulness of the newsletter. Two issues were published in 1993, in September and December (though the last one was only distributed in the first quarter of 1994). The December issue was mailed to 970 addresses in 77 countries (see Annex 5 for further details).

Furthermore the project is promoted with **visitors** to the institute. The visitors get a presentation of the project and a demonstration of ASFA on CD-ROM. Visiting scientists usually request a literature search at that occasion.

Following visitors were received in 1993 (in chronological order):
- Messrs. F.C. Roest and M. Van der Knaap, International Agricultural Centre (IAC), Wageningen (the Netherlands): members of an evaluation committee of an EEC project on Lake Victoria;
- Prof. K. Muthagi, Permanent Secretary of the Ministry of Research, Technological Training en Technology, Nairobi (Kenya);
- Dr. Temminck of the Agriculture University Wageningen (the Netherlands);

- a group of students of American universities;
- students and lecturers of Moi University (School of Environmental Sciences), Eldoret (Kenya);
- Dr. R. Herman, Ministry of Education, Brussels (Belgium);
- Ms. N. Nevejan, project manager KBP, Kisumu (Kenya);
- Mr. I. Trumbic, UNEP-Mediterranean Action Plan, Athens (Greece);
- Mrs. W. Ferguson, consultant with the Forestry Department in Nairobi (Kenya) and organisor of a workshop "Sustainable Management of Coastal Resources";
- Mr. T. Orekoya, programme officer FAO/UNEP (EAF), Nairobi (Kenya);
- a group of lecturers of Mombasa Polytechnic;
- Prof. J.J. Symoens, director of the VLIR project KBP, Kisumu (Kenya);
- Mr. G.O. Ondeng'e, National Environment Secretariat, Nairobi (Kenya);
- Mr. O.O. Ositeke, Director general of the Ministry of Agriculture and Water Resources, Nigeria;
- Dr. J. Lenvain and Mr. R. Rooze, VVOB, Brussels (Belgium);
- students and lecturers of Moi University (Dept. Meteorology), Eldoret (Kenya);
- Dr. A. Dickinson, Memorial University Newfoundland (Canada);
- Dr. V. Oeresland, University of Stockholm (Zweden);
- participants and resource persons of the JGOP Workshop, held in Mombasa in November, 1993;
- Mr. A. Maende, National Oil Corporation, Nairobi (Kenya);
- Dr. Hansell and Dr. J. Brock, participants of the JGOFS Executive Meeting, held in Mombasa in November, 1993;
- Dr. Chelazzi, Ms. Nocita and Messrs. Bertolucci and Parpagnoli of the University of Firenze (Italy);
- Mr. Aggrey Mlimuka, University of Dar es Salaam (Faculty of Law) (Tanzania);
- Dr. F. Bungenye, Director FIRI, Jinja (Uganda).

The project is also promoted at other occasions, such as (inter)national meetings and visits to other institutions. In 1993 the budget posting for travel for the project staff was not foreseen. Yet there were three opportunities for publicising the project: an international symposium in Mombasa and a visit to the KMFRI station in Kisumu (Lake Victoria) and to the Institute of Marine Sciences in Zanzibar (Tanzania).

From 29 March to 2 April, 1993, the KMFRI, supported by international donors such as IOC of UNESCO, IUCN, NOAA and SAREC, held in Mombasa the "International Symposium and Workshop on Status and Future of Large Marine Ecosystems of the Indian Ocean". Information on the Belgian projects, KBP and RECOSCIX-WIO, was available in a poster and in a newspaper supplement in the Daily Nation and the Kenya Times on the opening day of the symposium. The text on RECOSCIX-WIO submitted for publication, is included in Annex 6.

The project manager of the Kenya Belgium Project in Freshwater Ecology (KBP Kisumu) invited the project manager for a visit to the KMFRI station in Kisumu from 4 to 6 May, 1993. The aims of the visit were (i) acquaintance with the institute, the main station for freshwater research of KMFRI, (ii) (renewed) presentation of the RECOSCIX-WIO project to the scientists, (iii) acquaintance with the library and arrangements for closer co-operation with the project and (iv) solve some computer problems.

Most scientists already knew the project. It showed to be usefull however, to go into the details of information requesting and to make some agreements on an easier information delivery to this institute.

Although the growth of the library collection virtually stopped in the early 80s, there are enough interesting publications in the library. It was agreed to invite the library assistent in charge of the library to Mombasa for training in cataloguing with use of CDS/ISIS and MIBIS. During the visit the necessary software was already installed on the allocated computer. In June Mr. Lawi came to Mombasa for training (see III 1.1).

During his co-ordination mission the Belgian Project Director also visited Zanzibar and Tanzania. He was accompanied by the Belgian expert Dr. de Smet and by the project manager. In the University of Dar es Salaam the Belgian delegation met the acting Dean of the Faculty of Sciences, and the Heads of the Departments Botany, Geology and Zoology, and afterwards the University Librarian and members of staff of the University Library. There was also a visit to the Tanzania Fisheries Research Institute (TAFIRI) and the Kunduchi Marine Fisheries Research and Training Institute, both located in Dar es Salaam. Each time the same programme was followed: a brief introduction to the history of the project, an overview of the project's information services and explaining how the scientists can make use of the project.

The same was done in the IMS in Zanzibar, but there also a telecommunication problem was looked at. It showed to be impossible to connect a computer to the telephone network and it was not clear whether the problem was with the modem cable or with the modem itself. Both pieces were taken to Mombasa to be tested in an operational setup. After the modem cable was detected to be faulty, a new cable was sent back with the modem to Zanzibar, together with communication software.

In Zanzibar there was also the aquaintance with a project of the Memorial University of Newfoundland (Canada), which provided video recording and editing equipment to the IMS. These facilities could be used for promotion activities for the RECOSCIX-WIO project.

IV. PLANNING FOR THE IMMEDIATE FUTURE

With regard to the **information services** the objectives do not differ from the ones of last year. The quality has to be kept to the current level, possibly raised. More emphasis has to be placed with recent literature, e.g. through publicising the available periodicals to which the project is subscribed and through requesting of reprints.

The **WIOLIB** has to become the instrument to trace the available literature in the co-operating institutes and in that way to create some self-support within the region. The co-operating institutes have to be requested more regularly to send their input to the RDC, where the necessary efforts will be made to ensure the quality of the database.

The **WIODIR** has to be updated regularly to keep the data in accordance with the reality, especially when the database will be distributed on diskette by UNEP. Twice a year the available data will be presented to the scientists for correction. Beside those planned updates the local co-ordinators should inform the RDC on any changes within their institute. The immediate activities regarding the directory are the adoption of a new database structure developed in 1993 and the expansion of expertise towards coastal zone management.

Due to problems with the computer supplier, one of the most important objectives of the past year has not been filled, i.e. the implementation of **telecommunication** in the core computer in the RDC. Outgoing communication is already being done, but the major challenge is to make the server accessible for remote access. Then the databases managed by the RDC become available for all interested parties, and the communication possibilities within the region could be boosted by the use of electronic mail.

The activities ensuing from the above objectives necessitate further **training**. In follow-up of the 1992 workshop the librarians of the co-operating institutes will be invited to the RDC on an individual basis to be trained in cataloguing and use of telecommunication, through participation in the daily activities in the RDC. This programme has already started in 1993, but needs to be continued in 1994.

ANNEX 1. PROJECT BUDGET (IN BFR)

YEAR	1991/92	1993	1994	1995	TOTAL
1. Equipment					
Photocopier	300,000				300,000
Software	1,870,000				1,870,000
Hardware	1,890,000				1,890,000
Total/year	4,060,000				4,060,000
2. Operation costs					
Telecommunication	436,800	349,440	244,608	195,686	1,226,534
Mailing corresp.	160,000	128,000	102,400	81,920	472,320
Reproduction	200,000	160,000	128,000	102,400	590,000
Computer consumables	160,000	160,000	160,000	160,000	640,000
Periodicals	52,500	52,500	52,500	52,500	210,000
Doc delivery Belgium	900,000	600,000	450,000	300,000	2,250,000
Doc delivery (other)	525,000	350,000	262,500	262,500	1,400,000
Total/year	2,434,300	1,799,940	1,400,008	1,155,006	6,789.254
3. Personnel					
Regional travel	160,000		160,000		320,000
International travel	55,000		55,000		110,000
Total/year	215,000		215,000		430,000
4. Visits					
Coordinator per diem	76,734	76,734	76,734	102.312	332,514
Travel	55,000	55,000	55,000	110,000	275,000
Expert per diem	78,834				78,834
Travel	55,000				55,000
Total/year	265,568	131,734	131,734	212,312	741,348
5. Training					
Internships	256,000	256,000			512,000
Travel	80,000	80,000			160,000
Workshop		350,000		350,000	700,000
Total/year	336,000	686,000			1,372,000
Total/year	7,310,868	2,617,674	1,746,742	1,717,318	13,392,602
Administration	292,435	104,707	69,870	68,693	535,705
Sundry	292,435	104,707	69,870	68,693	535,705
GRAND TOTAL/year	7,895,738	2,827,088	1,886,482	1,854,704	14,464,102

ANNEX 2. LIST OF INSTITUTIONS

A. COOPERATING AND ASSOCIATED INSTITUTIONS

This list contains an enumeration of institutes that are part of the RECOSCIX-WIO network, either as Cooperating Institute, i.e. an institute that has received computer equipment through the project and supplies input in the WIOLIB database, or as Associated Institute, i.e. an institute whose scientists make use of the project's information services or are in the project's scientists' directory WIODIR.

Eritrea

ERI/ASMUNI[2]   Asmara University
Marine Biology & Fisheries Department
P.O. Box 1220
ASMARA (ERITREA)

Ethiopia

ETH/ADDUNI[2]   University of Addis Ababa
Department of Biology
P.O. Box 22041
ADDIS ABABA (ETHIOPIA)

Kenya

KEN/CRCPMO   Coral Reef Conservation Project
P.O. Box 99470
MOMBASA (KENYA)

KEN/FISMOM   Fisheries Department
Coast Province
P.O. Box 90423
MOMBASA (KENYA)

KEN/KENBOT[3]   Kenyatta Univeristy
Department of Botany

KEN/KENCHE[3]   Kenyatta University
Department of Chemistry

KEN/KENZOO[3]   Kenyatta University
Department of Zoology

KEN/KENUNI[1]   Kenyatta University
P.O. Box 43844
NAIROBI (KENYA)

KEN/KMFBAR[4]   Kenya Marine and Fisheries Research Institute
                     Baringo Laboratoy
                     P.O. Box 31
                     KAMPI YA SAMAKI   (KENYA)

KEN/KMFKEG[4]   Kenya Marine and Fisheries Research Institute
                     Kegati Laboratory
                     P.O. Box 3259
                     KISII   (KENYA)

KEN/KMFKIS[4]   Kenya Marine and Fisheries Research Institute
                     Kisumu Laboratory
                     P.O. Box 1881
                     KISUMU   (KENYA)

KEN/KMFMOM[1]   Kenya Marine and Fisheries Research Institute
                     Mombasa Headquarters
                     P.O. Box 81651
                     MOMBASA   (KENYA)

KEN/KMFNAB[4]   Kenya Marine and Fisheries Research Institute
                     Office of the Chairman
                     P.O. Box 58455
                     NAIROBI   (KENYA)

KEN/KMFNAV[4]   Kenya Marine and Fisheries Research Institute
                     Naivasha Laboratory
                     P.O. Box 837
                     NAIVASHA   (KENYA)

KEN/KMFSAN[4]   Kenya Marine and Fisheries Research Institute
                     Sangoro Riverine Research Laboratory
                     P.O. Box 136
                     PAP ONDITI VIA AHERO   (KENYA)

KEN/KMFTUR[4]   Kenya Marine and Fisheries Research Institute
                     Turkana Laboratory
                     P.O. Box 205
                     LODWAR   (KENYA)

KEN/KWSLAN   Kenya Wildlife Service
                        Langata
                     P.O. Box 40241
                     NAIROBI   (KENYA)

KEN/LAMFEM   Lamu Fort Environment Museum
                     Lamu Fort
                  P.O. Box 48
                  LAMU   (KENYA)

KEN/MOIFIS[5]   Moi University
                  Department of Fisheries

KEN/MOIZOO[5]   Moi University
                  Department of Zoology

KEN/MOIUNI   Moi University
                  P.O. Box 3900
                  ELDORET   (KENYA)

KEN/UONBOT[6]   University of Nairobi
                  Botany Department

KEN/UONGEO[6]   University of Nairobi
                  Geology Department

KEN/UONLAW   University of Nairobi
                  Faculty of Law

KEN/UONLOS   University of Nairobi
                  Law of the Sea Project

KEN/UONUNI[1]   University of Nairobi
                  P.O. Box 30197
                  NAIROBI   (KENYA)

KEN/UONVET   University of Nairobi
                  Department of Veterinary Medicine
                  P.O. Box 29053
                  NAIROBI   (KENYA)

KEN/UONZOO[6]   University of Nairobi
                  Zoology Department

KEN/WSPANI   World Society for the Protection of Animals
                  P.O. Box 34070
                  MOMBASA   (KENYA)

Madagascar

MAD/CNREAN   Centre National de Recherches
                   sur l'Environnement
               B.P. 1739
               ANTANANARIVO   (MADAGASCAR)

MAD/CNRONB[1]   Centre National de Recherches
                   Océanographiques
               B.P. 68
               NOSY-BE 207   (MADAGASCAR)

MAD/INSPAS   Institut Pasteur de Madagascar
               B.P. 1274
               ANTANANARIVO   (MADAGASCAR)

Mauritius

MAU/ALBION[1]   Albion Fisheries Research Centre
               Petite Rivière
               ALBION   (MAURITIUS)

MAU/METEOV   Meteorological Services
               St. Paul Road
               VACOAS   (MAURITIUS)

MAU/FAILRD   Food and Allied Industrial Ltd.
               Research and Development
               Gentilly
               MOKA   (MAURITIUS)

MAU/UNIMAU[1]   University of Mauritius
               School of Science
               REDUIT   (MAURITIUS)

Mozambique

MOZ/EMUFBI   Eduardo Mondlane University
               Department of Biological Sciences
               P.O. Box 257
               MAPUTO   (MOZAMBIQUE)

MOZ/IIPMAP[1]   Instituto de Investigacao Pesqueira
               P.O. Box 4603
               MAPUTO   (MOZAMBIQUE)

MOZ/NDFOWI   National Directorate of Forestry
      and Wildlife
P.O. Box 1406
MAPUTO   (MOZAMBIQUE)

La Réunion

REU/IFRMER   IFREMER
Délégation de la Réunion
B.P. 60
LE PORT   (LA REUNION - FRANCE DOM)

REU/ORSTOM   ORSTOM
Mission Technique Télédétection
B.P. 97491
ST. CLOTHILDE   (LA REUNION - FRANCE DOM)

Seychelles

SEY/DEPENV[1]   Department of the Environment
P.O.Box 445
VICTORIA-MAHE   (SEYCHELLES)

SEY/DEPIND   Department of Industry
Technological Support Services Division
P.O. Box 648
VICTORIA-MAHE   (SEYCHELLES)

SEY/SFAVIC[1]   Seychelles Fishing Authority
P.O. Box 449
VICTORIA-MAHE   (SEYCHELLES)

Somalia

SOM/NISAEC[2]   Ministry of Fisheries and Marine Resources
Natl. Inst. Statistics & Applied Economics
P.O.Box 2589
MOGADISHU   (SOMALIA)

Tanzania

TAN/DECLEZ   Department of Environment
Commission of Lands and Environment
P.O. Box 811
ZANZIBAR   (TANZANIA)

TAN/KMFRTI[2]	Kunduchi Marine Fisheries Research & Training Institute P.O. Box 60091 DAR ES SALAAM (TANZANIA)
TAN/NATMUS	National Museum of Tanzania P.O. Box 511 DAR ES SALAAM (TANZANIA)
TAN/TAFIKC[7]	Tanzania Fisheries Research Institute Kyela Centre P.O. Box 98 KYELA (TANZANIA)
TAN/TAFIRI[2]	Tanzania Fisheries Research Institute P.O. Box 9750 DAR ES SALAAM (TANZANIA)
TAN/UODBOT[8]	University of Dar es Salaam Department of Botany
TAN/UODGEO[8]	University of Dar es Salaam Department of Geology
TAN/UODIMS[1]	University of Dar es Salaam Institute of Marine Sciences P.O. Box 668 ZANZIBAR (TANZANIA)
TAN/UODSFR[8]	University of Dar es Salaam Seaweed Farming Research Division
TAN/UODUNI	University of Dar es Salaam P.O. Box 36060 DAR ES SALAAM (TANZANIA)
TAN/UODZOO[8]	University of Dar es Salaam Department of Zoology

[1] Cooperating institutes

[2] Initially cooperating institutes, next to current ones

[3,4,5,6,7,8] Different substations or departments of an institution

B. COOPERATING LIBRARIES

Limburgs Universitair Centrum (LUC)
Library
Universitaire Campus
3590 DIEPENBEEK   (BELGIUM)

Institute for Marine Scientific Research (IZWO)
Victorialaan 3
8400 OOSTENDE   (BELGIUM)

University of Gent
Artemia Reference Centre (ARC)
Rozier 44
9000 GENT   (BELGIUM)

Pacific Salmon Commission
Library
600 - 115 Robson St.
VANCOUVER, British Columbia   (CANADA V6E 1B5)

Freshwater Institute
Library and Publication Services
501 University Crescent
WINNIPEG, Manitoba   (CANADA R3T 2N6)

University of the South Pacific
Library
1168
SUVA   (FIJI)

UNESCO
7, place de Fontenoy
75352 PARIS 07 SP   (FRANCE)

IFREMER
Service Documentation et Bibliothèque
Centre de Brest
B.P. 70
29280 PLOUZANE   (FRANCE)

UNEP - OCA/PAC
Library and Documentation Centre
P.O. Box 30552
NAIROBI   (KENYA)

National Institute of Oceanography (NIO)
Library
Dona Paula
GOA 403 004   (INDIA)

FAO
Serials Library
Via delle Terme di Caracalla
00100 ROME   (ITALY)

FAO
Fisheries Branch Division
Library & Documentation Systems Division
Via delle Terme di Caracalla
00100 ROME   (ITALY)

Netherlands Institute for Ecological Research (NIOO)
Centre for Estuarine and Marine Ecology
Library
Vierstraat 28
4401 EA YERSEKE   (THE NETHERLANDS)

ICLARM
Library
P.O. Box 2631, Makati
METRO MANILA 0718   (PHILIPPINES)

SEAFDEC - Aquaculture Department
BRAIS - Library
P.O. Box 256
ILOILO CITY 5000   (PHILIPPINES)

Institute of Oceanographic Sciences (IOS)
Information Services
Deacon Laboratory
Brook Road, Wormley, Godalming
SURREY GU8 5UB   (UNITED KINGDOM)

Rosentiel School of Marine and Atmospheric Science (RSMAS)
Library
4600 Rickenbacker Causeway
MIAMI, Florida 33149   (U.S.A.)

Oregon State University
Hatfield Marine Science Center
Marilyn Potts Guin Library
2030 Marine Science Dr.
NEWPORT, Oregon 97365   (U.S.A.)

National Oceanic and Atmospheric Admin.
Nat. Environ. Satellite Data & Inf. Serv.
Library and Information Services
6009 Executive Boulevard
ROCKVILLE, Maryland 20852 (U.S.A.)

Marine Biological Laboratory
Library
Water Street
WOODS HOLE, MA 02543 (U.S.A.)

Woods Hole Oceanographic Institution
Library
Water Street
WOODS HOLE, MA 02543 (U.S.A.)

LITERATURE SEARCHES IN 1993

The results are represented as follows: number of request (number of citations delivered)

Institute	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total/inst
KEN/CRCPMO									2 (112)				2 (112)
KEN/FISMOM									2 (55)				2 (55)
KEN/KENUNI	1 (90)		1 (20)		2 (192)	1 (94)	1 (35)				1 (66)		7 (497)
KEN/KMFBAR			2 (91)		1 (28)								3 (119)
KEN/KMFKEG								2 (203)	1 (119)				3 (322)
KEN/KMFKIS	1 (130)	1 (12)	2 (92)	1 (51)	1 (433)	1 (31)	1 (38)				2 (57)		10 (844)
KEN/KMFMOM	3 (71)	7 (204)	4 (223)	4 (504)	5 (358)	4 (319)	3 (890)	8 (786)	10 (1867)	2 (197)	3 (141)	1 (31)	54 (5,591)
KEN/KMFSAN						3 (407)							3 (407)
KEN/MOIUNI									1 (125)			1 (241)	2 (366)
KEN/UONZOO		1 (22)								1 (49)			2 (71)
MAD/CNRONB											1 (112)		1 (112)
MAU/ALBION								1 (331)					1 (331)
MAU/METEOV							1 (184)						1 (184)
MAU/UNIMAU							1 (147)	1 (126)					1 (273)
SEY/DEPENV			1 (19)								2 (260)		3 (279)
TAN/TAFIRI								2 (522)					2 (522)
TAN/UODIMS							2 (294)	2 (107)			4 (436)		8 (837)
TAN/UODUNI								1 (112)			1 (33)		2 (145)
EXT				1 (80)				1 (98)			2 (353)		4 (531)
Total/month	5 (291)	9 (238)	10 (445)	6 (635)	9 (1011)	9 (851)	9 (1588)	18 (2285)	16 (2278)	3 (246)	16 (1458)	2 (272)	112 (11,598)

ANNEX 4. DOCUMENT DELIVERY IN 1993

(Note: Due to hard- and software problems in the computer used for processing the document delivery data, the complete statistics could not be produced at the time of editing this annual report. Part of the data have to be re-entered. More particularly there are no data on the filling rate per document supplier, nor on the delay in document delivery.)

For the second consecutive year there was a notable increase in the number of document request: a total of 2476 request was sent out in 1993, or an increase of 939 (or 61.09%) compared to 1992. The fill rate, i.e. the number of documents delivered out of the requests, was 69.39% by mid January (in 1992 this was 69.9%). Not taking into account the request for November and December 1993, the fill rate was 76.04%.

TABLE I. REQUESTS PER INSTITUTE

For an explanation of the institute codes, see Appendix 1 of this report. The three letter codes are used in the graphs.

CODE	INSTITUTE	REQUESTS	PERCENTAGE OF TOTAL
KKM	KEN/KMFMOM	1023	42.13
KKK	KEN/KMFKIS	524	21.58
MUM	MAU/UNIMAU	108	4.45
KCR	KEN/CRCPMO	105	4.32
KKU	KEN/KENUNI	88	3.62
TUI	TAN/UODIMS	84	3.46
KKS	KEN/KMFSAN	78	3.21
MAF	MAU/ALBION	76	3.13
KUN	KEN/UONUNI	64	2.64
KKI	KEN/KMFKEG	56	2.31
KMF	KEN/MOIFIS	55	2.27
SDE	SEY/DEPENV	55	2.27
KKB	KEN/KMFBAR	42	1.73
MCN	MAD/CNRONB	30	1.24
TTA	TAN/TAFIRI	16	0.66
KFM	KEN/FISMOM	8	0.33
TKM	TAN/KMFRTI	8	0.33
KKT	KEN/KMFTUR	5	0.21
MIP	MOZ/IIPMAP	2	0.08
SSV	SEY/SFAVIC	1	0.04

Again the KMFRI (headquarters in Mombasa and the different substations) is by far the largest user of the project's services, filing 71.17% of the requests from the institutes, i.e. not counting 48 requests by externals. It is pleasing to notice that some institutes have sent considerably more requests than previous years, but still efforts have to be done to make the project known to all aquatic scientists in the region.

The largest numbers of requests were noted in May (459). The months March (98) and April (87) had the lowest number of requests. This is no coincidence. Alarmed by the dropping number of request the staff of the RDC undertook a reorganisation of the office and in the process a large pile of request forms misplaced in March and April turned up and was processed in May. An overview is given in Table II.

TABLE II. MONTHLY NUMBER OF DOCUMENT REQUESTS

January	212	July	188
February	150	August	138
March	98	September	253
April	87	October	194
May	459	November	266
June	237	December	194

The five most important (potential) document suppliers in 1992 were:

1. RDC	541	21.85%	(of the total number of requests)
2. LUC	449	18.13%	
3. NIO	324	13.09%	
4. RSMAS	252	10.18%	
5. Freshwater	230	9.29%	

The observation that the RDC has become the main document supplier is already an indication of the the success of the project. However it can not stop here. A larger contribution is expected from the institutes in the region. A start for this is a union list of periodicals found in research libraries in Kenya. An initiative such as this has to be extended to the region and the instrument for this is the RECOSCIX-WIO project.

In the past year, more than 20 document suppliers were used (see Table III).
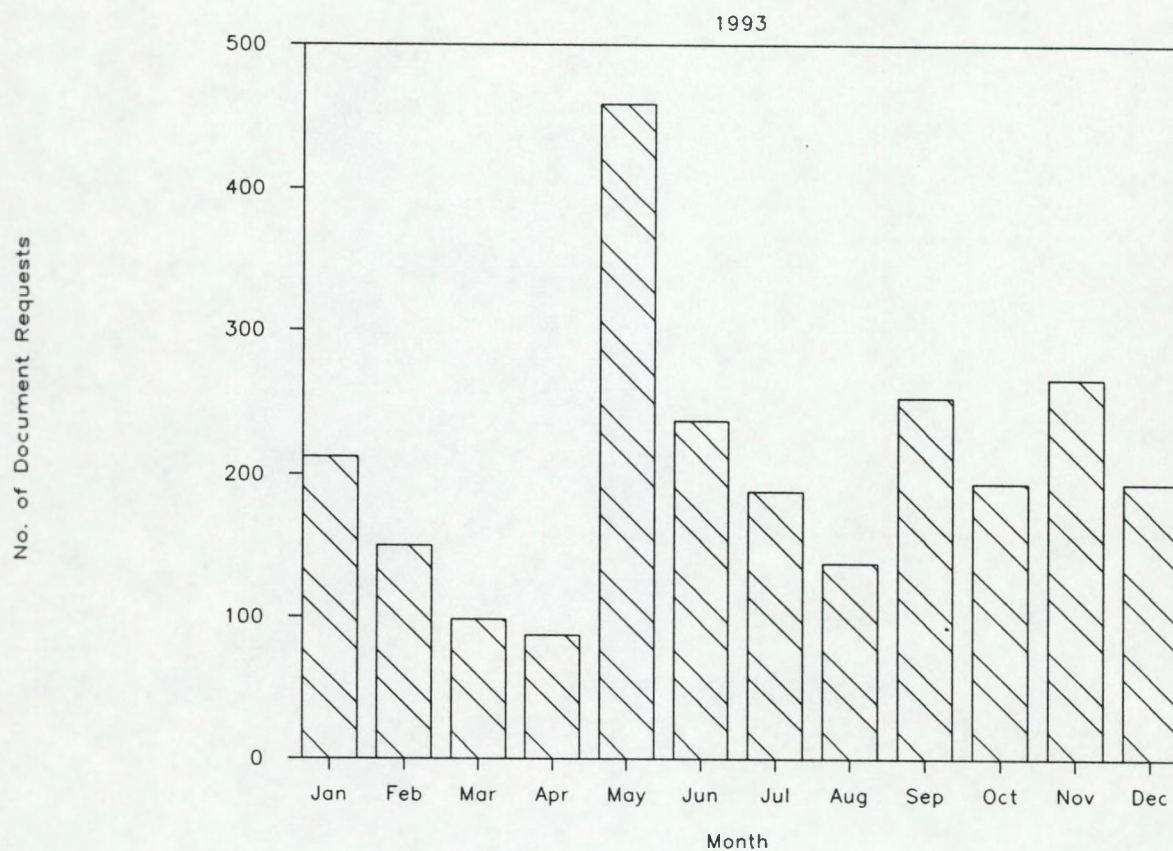
TABLE III. DOCUMENT DELIVERY ACCORDING TO SUPPLIER

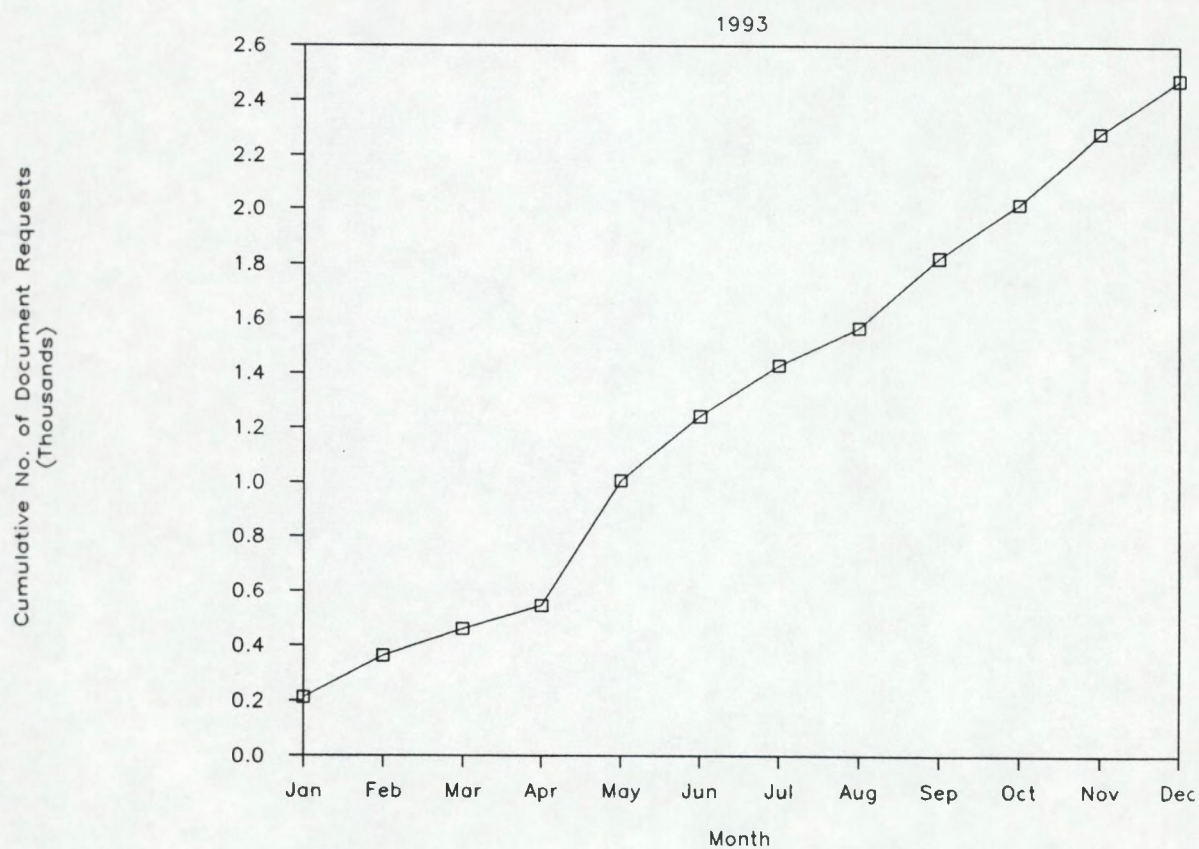| CODE	SUPPLIER	REQUESTS
RD	RDC, Mombasa (Kenya)	541
KU	Kenyatta University, Nairobi (Kenya)	16
UO	University of Nairobi (Kenya)	53
UN	UNEP, Nairobi (Kenya)	16
MU	Moi University, Eldoret (Kenya)	16
IM	IMS, Zanzibar (Tanzania)	22
FA	FAO, Rome (Italy)	37
UO	UNESCO, Paris (France)	19
IF	IFREMER, Plouzané (France)	50
LU	LUC, Diepenbeek (Belgium)	449
AR	ARC, Gent (Belgium)	35
DE	NIOO, Yerseke (The Netherlands)	52
IO	IOS, Wormley (United Kingdom)	21
FR	Freshwater, Winnipeg (Canada)	230
RS	RSMAS, Miami (U.S.A.)	252
GU	Guin Library, Newport (U.S.A.)	72
IC	ICLARM, Manilla (Philippines)	139
NI	NIO, Dona Paula (India)	324
OT	Others (Libraries and Authors)	132

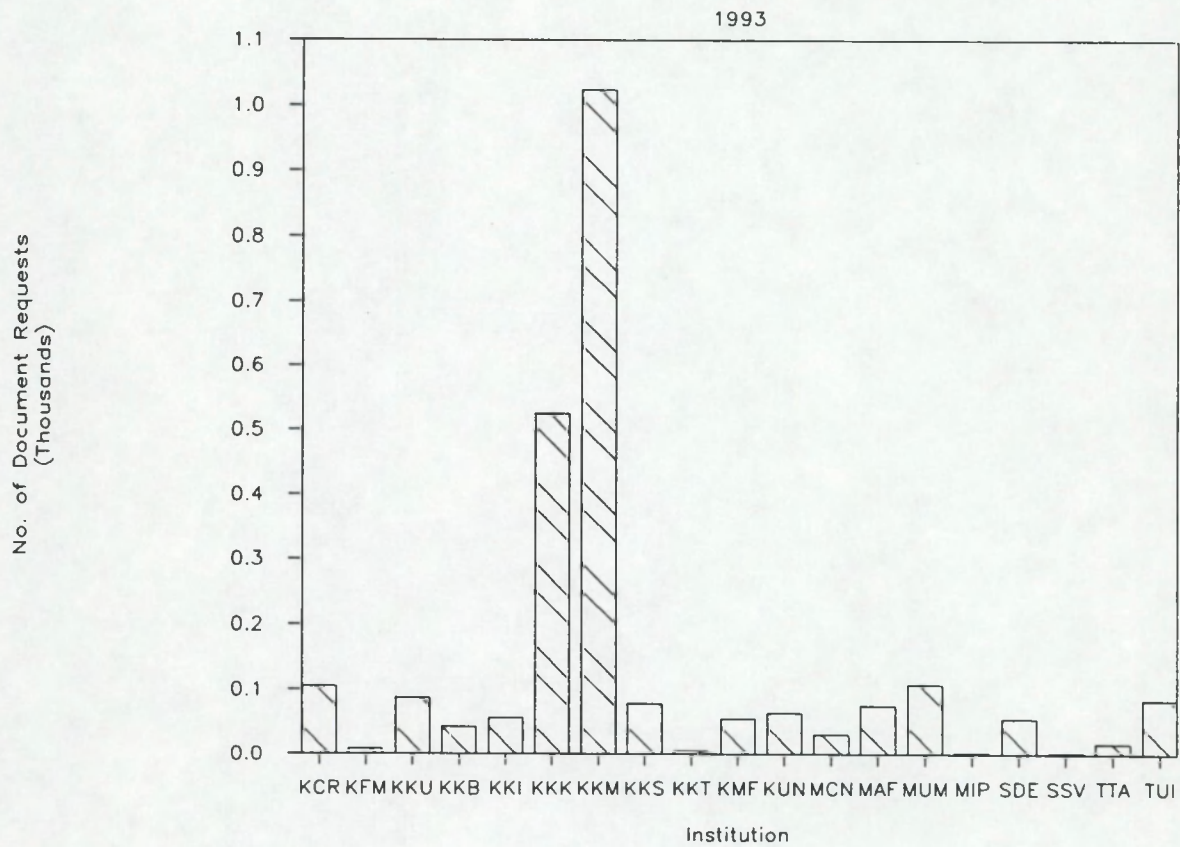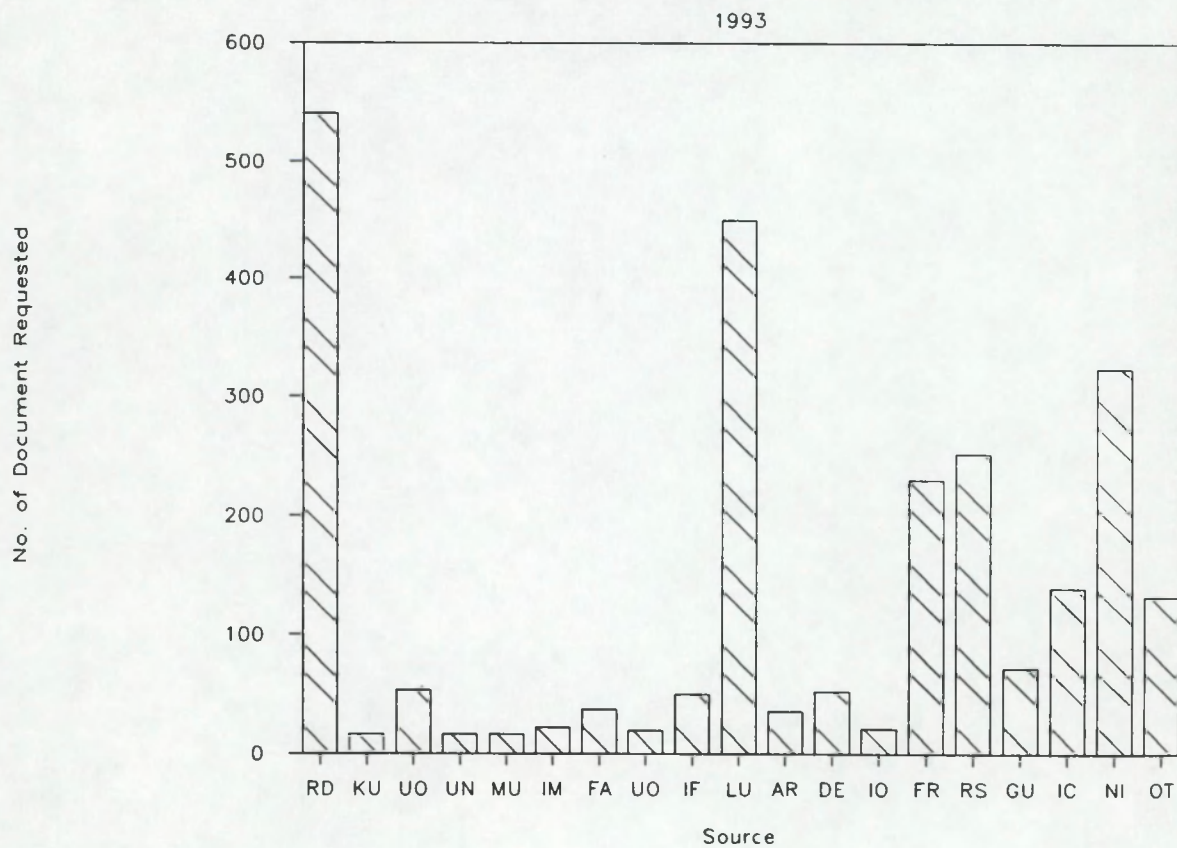These and more data are illustrated in the following graphs.

MONTHLY DOCUMENT REQUESTS

1993

CUMULATIVE MONTHLY DOCUMENT REQUESTS

1993

DOCUMENT REQUESTS PER INSTITUTE

1993

No. of Document Requests (Thousands)

Institution

KCR KFM KKU KKB KKI KKK KKM KKS KKT KMF KUN MCN MAF MUM MIP SDE SSV TTA TUI

REQUESTS PER DOCUMENT SUPPLIER

1993

No. of Document Requested

Source

RD KU UO UN MU IM FA UO IF LU AR DE IO FR RS GU IC NI OT

ANNEX 5. DISTRIBUTION OF NEWSLETTER PER COUNTRY END 1993

Africa

Angola	1	Morocco	3
Benin	1	Mozambique	33
Botswana	2	Niger	1
Cameroun	2	Nigeria	14
Comoros	8	Rep. Djibouti	1
Congo Brazzaville	2	Rwanda	1
Egypt	4	Senegal	16
Eritrea	2	Seychelles	26
Ethiopia	16	Sierra Leone	2
Ghana	3	South Africa	10
Guinea Rep.	5	Swaziland	1
Ivory Coast	3	Tanzania	75
Kenya	265	Togo	1
La Réunion	7	Uganda	1
Madagascar	35	Zaire	1
Malawi	1	Zimbabwe	1
Mauritania	1		
Mauritius	53	**Total Africa**	**598**

America

Bermuda	3
Brazil	1
British West Indies	1
Canada	13
Costa Rica	4
Cuba	1
Ecuador	1
Jamaica	5
Mexico	4
Trinidad & Tobago	1
U.S.A.	116
Total America	**150**

Asia

India	22
Indonesia	2
Iran	1
Iraq	1
Japan	1
Malaysia	1
Pakistan	1
Philippines	10
P.R. China	1
Sri Lanka	14
Thailand	1
Ukraine	2
Total Asia	**57**

Europe

Austria	1	Monaco	2
Belgium	45	Netherlands	13
Denemark	2	Norway	4
France	17	Portugal	2
Germany	6	Russia	4
Greece	2	Sweden	15
Iceland	1	Switzerland	4
Ireland	1	U.K.	19
Italy	12		
		Total Europe	**150**

Oceania

Australia	10	New-Zealand	1
Fiji	4		
		Total Oceania	**15**

ANNEX 6. NEWSPAPER CONTRIBUTION ON PROJECT

Regional Co-operation in Scientific Information Exchange in the Western Indian Ocean region (RECOSCIX-WIO) : KENYA-BASED INFORMATION SERVICES FOR THE REGION

The Kenya Marine Fisheries Research Institute (KMFRI), houses, in its headquarters in Mombasa, a project with regional involvement, called Regional Co-operation in Scientific Information Exchange in the Western Indian Ocean region (RECOSCIX-WIO).

The regional character of the project is based on the 15 institutes in 8 countries located around the Western Indian Ocean (WIO). Along the eastern coast of the African continent these countries are Ethiopia (and Eritrea), Somalia, Kenya, Tanzania and Mozambique. In the ocean itself Madagascar, Mauritius and the Seychelles make up the remaining three. How the core of the project, the Regional Dispatch Centre (RDC), came to Mombasa has to be seen through the history of the project.

The supply of scientific literature became too heavy a burden for the Kenya Belgium Project in Marine Sciences (KBP). However, information is an indispensable tool to a scientist, who need to keep up with what is going on in his field. Because of increasing costs, libraries around the world have to cut in their purchases of books and subscriptions to journals. That was the main reason why, upon discovering this urgent need of information support in KMFRI, the Kenya Belgium Project at that time, started thinking of information services to a wider region.

The KBP project sent Mr. Peter Pissierssens, who later became founder of RECOSCIX-WIO, to visit the regional institutes for marine sciences and fisheries in the above mentioned countries, Comores and La Réunion. In 1989 the IOC-UNESCO officially launched the RECOSCIX-WIO project. The funding was intended to take the project through a starting phase of two years, after which time another donor should take over. Stimulated by Prof. P. Polk, the spiritual father of KBP, again it was Belgium who accepted the challenge. The Limburg University Centre, through its librarian Prof. L. Egghe, is co-ordinating RECOSCIX-WIO, sponsored by the VLIR, the Flemish Interuniversity Council.

What are the RECOSCIX-WIO activities?
The project provides the aquatic (marine and freshwater) scientist with the information he needs for his work. RECOSCIX-WIO has access to information on literature, collections of short contents of published documents (insiders call these bibliographic databases). From these it can extract relevant items for scientists who request literature references on their research topic. A list of citations is produced and presented to the scientist, who then is able to select from that list the documents he really would like to read. The logical further step is to obtain requested documents for that scientist. To do so RECOSCIX-WIO can rely on the co-operation of some twenty libraries around the world (Europe, Canada, United States, Philippines, India, Australia). Most of the libraries send copies of the requested documents at cheap rates, or even free. This way RECOSCIX-WIO could supply about 3,000 documents, mostly copies of journal articles, to the aquatic scientists in the WIO region during the past three years. Through several contacts RECOSCIX-WIO has already obtained many of such publications as a donation and is steadily building a collection of its own. Slowly it is able to fill part of the documents requests from this. The advantage for the scientists is a shorter waiting period to obtain the copy and for the project a better management of the available funds, because getting documents from the other side of the world after all costs money.

Upto now almost everything was focussed on scientific literature. In December 1992, however, there was a meeting of the Regional Committee of IOC-UNESCO in Mauritius. Kenya was represented by KMFRI amd the project manager of RECOSCIX-WIO. During that meeting it became clear that RECOSCIX-WIO is well accepted in the region amd that there is a wish that the Regional Dispatch Centre becomes a regional store of scientific information in the form of actual data. As things stand now the institutes in the region collect a lot of data, like the ones for sea level monitoring, that are sent abroad for processing. Yet at this point the institutes loose grip on their data. RECOSCIX-WIO could go against this by storing the regional scientific data in its computer in Mombasa and keeping the data available for the scientists in the region.

A second line of RECOSCIX-WIO activities is the collection of information on the region. It has built a directory of marine/aquatic scientists in the WIO region. The printed version was published by UNEP's Oceans and Coastal Areas Programme Activity Centre in Nairobi. Now the staff of the Regional Dispatch Centre is working on a computer-readable version with user-friendly search facilities. The directory offers an overview of the scientists, where they are working and what their research topics are. The purpose of the directory is double. First it should stimulate the co-operation between scientists in the region working on the same or related topics. Secondly it makes their expertise known to the rest of the aquatic sciences community around the world. This also can induce co-operation and joint projects and working programmes could follow.

Another database in development is a collective catalogue of library holdings of the aquatic sciences institutes in the region. To make full use of the literature present in the regions, the establishment of a collective catalogue was taken as one of the project's priorities. Similarly a database of publications by the scientists in the region was envisaged. The scientists of the WIO region have written a lot that can interest scientists from abroad. These publications, however, are not always in internationally available journals and so remain unknow to all but the readers of local periodicals. Presenting an overview of these documents must bring the regional research activities and results into the open and meet the principal goal of the project, to exchange information.

On the crossroads of the information flows towards and from the region is the project's newsletter WINDOW. Though also bringing information to the scientists in the WIO region, it wants to present a picture of the research activities on the Indian Ocean and be a "window" on this part of the world. And it is since the mailing list shows a distribution of the newsletter to all continents, all around the globe.

RECOSCIX-WIO heartly thanks KMFRI for the organisation of the present symposium, because in doing so it has created an opportunity for scientists in the WIO region to meet their colleagues. Almost all of the institutes co-operating in RECOSCIX-WIO are represented in the participants' list. Besides there is a considerable representation of scientists from abroad, of which some will share their skills with the WIO scientists during a one-day training workshop. The basic goals of RECOSCIX-WIO, commmunication and exchange of information, are met during this symposium on the Indian Ocean and therefore the project fully supports this initiative of KMFRI.

REPORT ON THE COORDINATION MISSION TO THE RECOSCIX-WIO PROJECT

8 - 20 JULY 1993

L. EGGHE

INTRODUCTION

The main purpose of this coordination mission was to evaluate the RECOSCIX-WIO project in all its aspects : services, staff evaluation (Kenyan and Belgian), education, computers and telecommunication, p.r. aspects , performance of the "Cooperating Institutes" (CI's) and so on as well as establishing further links with international organisations.

This trip has also benefitted from the presence of Prof. P. Poₗk (coordinator KBP), Mr. P. Pissierssens (representative IOC), Dr. E. De Smet (UIA and CDS/ISIS expert), Dr. M. Ngoile (president WIOMSA), Dr. S. Ragoonaden (chairman IOCINCWIO), Dr. S. Ochuodho (telecommunications expert, U. of Nairobi) and Mrs. M. Naessens-Vlieghe (representative VVOB).

Next, we present a chronological report on the visit then followed by a concluding section.

CHRONOLOGICAL REPORT

Thursday July 8th

Departure for Nairobi

Friday July 9th

Arrival in Nairobi. Departure for Mombasa. Transport to the guest house. In the evening, there were informal discussions with the general manager, Dr. P. Reyniers.

Saturday July 10th

a.m.

EVALUATION OF THE RECOSCIX-WIO COMPUTERSYSTEM (present : E. De Smet, L. Egghe, S. Ngete, M. Odido, P. Reyniers and specially invited to this meeting was Dr. S. Ochuodho, professor in the University of Nairobi and computer expert involved with the installation of INTERNET in Kenya).

UNIX has been implemented on the main system. It will be Dr. De Smet's task to see how online links with this can be made possible, both from in Kenya and outside of Kenya. The fact that a wrong piece of hardware (to be used for telecommunication) has been delivered by ICL must be solved. This is an urgent issue. Apart from this, the machines are working fine and the necessary software has been implemented.

Much time has been devoted to the future telecommunications. For the moment, the spent budged on this is very high (see annual report) and any way to lower this burden should be considered with great care. Dr. S. Ochuodho proposed RECOSCIX-WIO to become a founding institute for INTERNET. He proposed an initial budget of $ 2000 per month, this for about a year, after which the necessary budget would be much lower. In fact, once INTERNET becomes fully operational, the cost could drop to zero, being a founding institute. In any case this amount is very high and further discussion of this point was postponed to a next meeting in Nairobi on July 19th. This proposal was based on an oral agreement of two other institutions to become founding organisations for INTERNET, namely ILRAD, and UNEP. It was also agreed that L. Egghe would mention this topic during the meeting with the minister in Nairobi on July 19th.

For more technical details on this, see the report of Dr. De Smet.

p.m.

RECOSCIX-WIO PROJECT EVALUATION (L. Egghe and P. Reyniers)

The recent trip of Phyllis Mutere to Paris (French course - sponsored by IOC) was discussed and the positive results were appreciated. It was agreed that she could be proposed to follow the MIST course in 1994 in Brussels since she is very active in the input of the bibliographic data and since she is intelligent and keen to learn. L. Egghe will write a proposal to Prof. Nieuwenhuysen, coordinator of this MIST course.

On the other hand some other Kenyans, devoted to the project should be more motivated and especially the problem of the librarian is urgent. This will be a major point in the discussions with Dr. Okemwa. The continuation of the project must be settled during this mission.

It is also noted that some CI's should be more active in the cooperation with the project. One manager alone cannot pay regular visits to all of these CI's so that one should think of a second person dedicated to this problem. In any case, later during this mission, an evaluation of some Tanzanian CI's will be executed.

Sunday July 11th

Free day.

Monday July 12th

9 a.m. - 10 a.m.

MEETING WITH VVOB-REPRESENTATIVE (M. Naessens-Vlieghe and L. Egghe).

The problems with the present VVOB person, the general manager of

RECOSCIX-WIO, have been discussed. One could conclude that Dr. Reyniers is working very hard to make the project a success but that his communicative qualities are low. On the other hand his present task is very wide and could easily been given to two VVOB staff members. In any case, the difficulties between him and the IOC representative should stop. These ideas will be further discussed with the director of KMFRI.

10.30 a.m. – 00.45 p.m.

RECOSCIX-WIO PROJECT EVALUATION (E. Okemwa, L. Egghe, P. Reyniers and P. Pissierssens)

L. Egghe gave a general overview of the project at this stage. He expressed his satisfaction on the results of the project : Query Handling (QH) and Document Delivery (DD) are working very well, the computers have been bought and installed (apart from a few problems they are working fine) and the input is going on. He said that the involvment of the non-Kenyan cooperating institutes could be improved. In general the p.r. aspects of the project (essential for its continuation once the Belgian financing stops) can still be improved. The actions of the Kenyan staff members in the RECOSCIX project are highly appreciated and L. Egghe expressed his gratitude to Dr. E. Okemwa for this and for the offered infrastructure.

P. Reyniers expressed his agreement with L. Egghe and added that a new Kenyan staff member recently joined the RECOSCIX-WIO RDC, namely Mr. Kennedy Onyoncha. He could replace Mr. Odido as scientific manager. Mr. Odido will devote himself more to scientific research since he is qualified to do so. Mr. Onyoncha has an information science background from Moi University and hence can be of high value within RECOSCIX.

E. Okemwa referred to the problems with the general manager and made the comparison with his predecessor, P. Pissierssens. He said that P. Reyniers works very hard but that he had a problem in delegating things (that has improved now) and with the p.r. tasks of the project. He also recognises the wide task of the general manager so that a splitting up of this task could be advisable. He recognises the problem with J. Mwobobia : she is not capable to work in the information technological environments of nowadays. Although she is not dedicated to the RECOSCIX-project, this constitutes a serious problem since, at the end, the librarian is supposed to take over the lead of the information services that are organised so far by RECOSCIX. He also mentions the fact that Mr. Odido is going to devote himself more to scientific work. He concludes with the wish that the activities of the CI's must be revitalised, even in Kenya and that new contacts should be established (e.g. with the "Law of the sea" project in Nairobi and with the Moi University library).

P. Pissierssens continued by referring to the successfull training course of August 1992 and to the journal WINDOW (which should appear more frequently – SAREC funding is approved for $ 15000). He then underlined the necessity for a modern library management in KMFRI, which is not present right now. He mentions the problem nowadays in Kenya with the frequent electricity power failures and its possible influence on telecommunication. Possibly satellite connections could be considered. He agrees with the previously made remarks on P. Reyniers and on the reconsideration of the tasks of the general

manager.

At the end of the meeting, P. Reyniers is requested to leave the room. E. Okemwa then said that the VVOB had requested a decision on the continuation of P. Reyniers right away. It was decided to resume in the afternoon in order to take a final decision.

00.45 p.m. – 1 p.m.

FORMAL INTRODUCTION OF E. DE SMET.

2 p.m. – 3.30 p.m.

An informal discussion between L. Egghe and P. Reyniers took place in order to prepare the afternoon meeting with E. Okemwa. P. Reyniers expresses his wish to become more involved in the library of KMFRI, but that he needs a formal mandate for it and that it can only work in case he is not dependent of the present librarian J. Mwobobia.

At this meeting it was also decided to buy a PC for the CI in Madagascar. So far they had not received one since they could work on a computer donated by IOC. This computer has now broken down and hence a replacement is necessary.

4 p.m. – 5.30 p.m.

DISCUSSION ON THE CONTINUATION OF THE GENERAL MANAGER (L. Egghe, E. Okemwa, P. Pissierssens).

After some discussions it was decided to create a vacancy for the job of "senior librarian", which is above the present librarian. Furthermore, as long as this vacancy is not filled, P. Reyniers will act as "acting senior librarian" and in any case he will be involved with the library aspects of RECOSCIX-WIO. All parties consider this as a very good solution. P. Reyniers will be requested to make a work plan for the development of the KMFRI library (which will also contain the RECOSCIX-WIO holdings, of course). The counterpart of P. Reyniers will be K. Onyoncha. For Mr. S. Ngete, E. De Smet is appointed as counterpart. A Kenyan counterpart for the new VVOB staff member will be appointed, in case VVOB is accepting this new position. A detailed description of the tasks of this new position will be made tomorrow. With this new task description of P. Reyniers, it is agreed to continuate the activities of P. Reyniers as VVOB staff member dedicated to KMFRI.

Tuesday July 13th

9 a.m. – 10 a.m.

PRESENTATION OF RECOSCIX-WIO TO PROF. H. EISENDRATH (VUB).

10 a.m. – 00.30 p.m.

MEETING RECOSCIX-WIOMSA (L. Egghe, M. Ngoile, E. Okemwa, P. Pissierssens, P. Reyniers, S. Ragoonaden).

M. Ngoile gave an overview of the history and objectives of WIOMSA (Western Indian Ocean Marine Science Association). He made a special

point of the importance of RECOSCIX-WIO for the region and expressed the wish for close collaboration. Especially in WINDOW much collaboration is possible. At the end of RECOSCIX-WIO (1995 if no continuation is received) it should be in the aim of WIOMSA to include the RECOSCIX support in their budgets. The cost of it is estimated at about $ 50000 per year. The position of the present RECOSCIX-WIO staff in this new situation is considered as a possible problem but can be solved later. In any case L. Egghe is advised to apply for continuation after 1995 by the Belgian government with special mention to the future link with WIOMSA. It is agreed that P. Reyniers will produce a list of all activities that were produced by RECOSCIX-WIO so far, this in order to inform WIOMSA.

ON SHORT TERMS it was agreed to start efficient communication between WIOMSA and RECOSCIX. To this end E. De Smet will be requested to test the installations (modem and software, donated by SAREC) of IMS in Zanzibar. Also, IOC was requested to allocate WIOMSA an OMNET mailbox. In addition to that S. Ragoonaden also requests such a mailbox in order to also ensure the communication with IOCINCWIO.

The final discussions were aimed at the publication of WINDOW. It was agreed to have 4 issues per year. This can only be achieved if there is local input from the CI's. In order to ensure better variety of input sources, it was agreed that the following group would invite and collect input : IOCINCWIO (S. Ragoonaden, E. Okemwa), WIOMSA (M. Ngoile) and IOC (P. Pissierssens). It was decided to have 2 more issues of WINDOW in 1993. At least the first of these will be bilingual (English - French) with an evaluation sheet in order to estimate the future need for such a bilingual jounal. P. Reyniers will estimate the cost of a bilingual journal, based on 1500 copies. The addition of a French version is not only important for countries like Madagascar, Mauritius in the WIO region, but also in the connection with the RECOSCIX-CEA project that IOC is starting now in West Africa. The next issue of WINDOW should contain a "refreshment" on RECOSCIX-WIO, WIOMSA, IOCINCWIO, the Arusha meeting and an introduction to RECOSCIX-CEA.

2.30 p.m. – 5 p.m.

RECOSCIX PROJECT EVALUATION MEETING (L. Egghe, P. Pissierssens, P. Reyniers).

The review of the job description of P. Reyniers has already been mentioned. The second VVOB job could be called "communication manager". In its description we give attention to recommendations made during UNCED and the Arusha conference with regard to the need for developing public awareness activities in all scientific programmes and projects. The job description is as follows :

1.   To act as editor and publisher of WINDOW.
2.   To publicise RECOSCIX at appropriate occasions
3.   To organise training activities and tools for RECOSCIX-WIO.
4.   To produce appropriate tools and products for the development of public awareness for the marine environment (AV-media, books, brochures, and so on).
5.   To develop training modules in environmental education for primary and secondary schools.
6.   All the above metntioned tasks require a good knowledge of

present PC techniques.

This description will be presented by L. Egghe to VVOB.

Finally, a list of priorities until 31 December 1993 has been made :

1. Two issues of WINDOW must be published (8/93, 12/93).
2. WIODIR : one update to be released (9/93).
3. WIOLIB : first release (10/93).
4. Library reorganisation : a detailed workplan (made by P. Reyniers) must be submitted to E. Okemwa and L. Egghe (8/93). Implementation starts 10/93.

It was also decided that CI's will be paid $ 2 per satisfied request that has been made to them by RECOSCIX-WIO. This will stimulate CI's in preparing WIOLIB.

Wednesday July 14th

9 a.m. - 12 a.m.

MEETING RECOSCIX-WIOMSA (L. Egghe, M. Ngoile, E. Okemwa, P. Pissierssens, S. Ragoonaden, P. Reyniers).

It was decided that WIOMSA is going to be recognised as a CI in RECOSCIX -WIO and that a PC for WIOMSA can be purchased. The final decision is, however, postponed until the visit of IMS in Zanzibar is executed.

2 p.m. - 5 p.m.

MEETING WIOMSA - IOCINCWIO (L. Egghe, M. Ngoile, E. Okemwa, P. Pissierssens, Ph. Polk, S. Ragoonaden).

WIOMSA is considered as a regional branch of IOCINCWIO, as was accepted in Mauritius. This link is very important. The specific task of WIOMSA in this connection is to look for scholarships and to give training to scientists to make proposals. Both organisations should also collect project proposals (directory of projects). IOCINCWIO determines the projects via the memberstates, while WIOMSA will execute them.

There were also discussions on the next donor meeting in Brussels (november-december) for which SAREC is inviting. On this meeting, WIOMSA will make project proposals since at that time WIOMSA will be registered officially.

Thursday July 15th

Departure to Zanzibar (E. De Smet, L. Egghe, M. Ngoile, P. Reyniers).

Friday July 16th

One day trip to Dar Es Salaam, where several visits are organised.

9.30 a.m. - 12 a.m.

MEETING WITH THE LIBRARIAN, THE DEAN AND HEADS OF DEPARTMENTS OF THE UNIVERSITY OF DAR ES SALAAM (E. De Smet, L. Egghe, P. Reyniers,

together with the following University of Dar Es Salaam staff members : J.M. Newa, director of library services, Lulangalanga, head botany department, A. Nikundiwe, head zoology department, Mruma, acting head geology department, Yarro, acting dean).

After an introduction of L. Egghe about the purpose of the visit (refreshment on the RECOSCIX-WIO services, evaluation of the CI's, ...) the staff of the university of Dar Es Salaam made some remarks and posed some questions. It appears that the library contains a lot of grey literature on marine sciences which could be entered in WIOPUB. Also WINDOW is very much appreciated. The participation of the university will increase since nowadays there are several ongoing Ph. D.'s. They also request a new printout of WIODIR. It was agreed that P. Reyniers will contact UNEP about a new release (UNEP paid also the first printed version while the software for it was developed by RECOSCIX-WIO). In general, the Belgian delegation was happily surprised to see a very professional library (very large, incl. new technologies, such as CD-ROM discs). They are going to automate via CDS/ISIS.

This meeting was followed by a short meeting with the library staff. In this meeting it became clear that, besides CI's, also "Associated Institutes" (AI's) could be defined : this are institutes that request literature but do not require a PC. Otherwise stated, AI's act in one direction; CI's act in two directions. Whether or not the present library will become a CI is not clear at the moment, but it is recognised that from now on it is better to start as an AI and only if the load of received publications is very high one can think of making a contract with this AI to become a CI. This will be the approach for every newly interested institute with which RECOSCIX will have contact.

12 a.m. - 1 p.m.

MEETING WITH THE STAFF OF TAFIRI (besides the Belgian delegation, there were also present : Abdillahi I. Chande, Salome P. Mwaiko, Modesta Neclarol, Esther Makwaia, Hassan A. Mhitu, G.C. Mahka and L.B. Nhwani, researchers).

From previous information that was given to the TAFIRI staff members, given a few years ago, it was concluded by them that a PC was going to be delivered. This vision was corrected as explained above (AI's and CI's) : it was stressed that more documents must be requested before the institute can become a CI. Also in TAFIRI we noted the request to reprint WIODIR.

1 p.m. - 2 p.m.

MEETING WITH THE STAFF OF KUNDUCHI (besides the Belgian delegation, there were also present : S.P.N. Kimaro, G.F.N. Nanyaro, R.S. Chitomina, A.T. Kamukune, G.B.M. Myaka, J. Mjowai).

Discussions on RECOSCIX were held and the KUNDUCHI staff expressed their interest to become an AI. The small library could later be included in the RECOSCIX network.

3.30 p.m. - 4.30 p.m.

MEETING WITH THE CHIEF ACADEMIC OFFICER OF THE UNIVERSITY OF DAR ES SALAAM.

This official meeting had the purpose to introduce the services of RECOSCIX-WIO to this top staff member of the university. He expressed the need for such a service and pleaded for a "clearinghouse principle" of payment between all AI's and CI's. This is an interesting idea in order to restrict administrative work and to limit financial transactions. Incidentally, this system is also followed in Belgium as far a interlibrary contacts are concerned.

In the evening : return to Zanzibar.

Saturday July 17th

9 a.m. - 11.30 a.m.

MEETING WITH THE STAFF OF IMS (INSTITUTE OF MARINE SCIENCES). (L. Egghe, P. Reyniers, and the following IMS staff members : F.E.Msuyer, M.A. Ngendi, J.P. Shunula, M.M. Salim, O. Mwaipopo, S.G.M. Ndaro, K. Tengeneza, N. Jiddawi and P.G. MacLeod, this last person is a visitor and an AV specialist).

IMS was introduced to the Belgian delegation, followed by a visit of the institute. It was remarkable to see that they were very well equiped with PC materials. As a conclusion of this we decided to postpone the purchase of the PC for WIOMSA until it is clear that the existing computers are too heavily used for other activities. L. Egghe is going to write a letter to M. Ngoile on this matter.

In general, the IMS staff appreciates the activities of RECOSCIX-WIO and asked to continue with the services. They also posed some interesting questions. One dealt with the delivrance of satellite images. So far we have not had any requests for this, but we engaged ourselves to go into this, whenever there is a request for it. Another question was about the possibiblity of adding scientific articles in the journal WINDOW. This was also suggested on another occasion by UNEP. RECOSCIX is certainly willing to go into this, especially when we are talking about the publication of preliminary research work (e.g. data).

Another interesting point is the ongoing project for which Mr. P. MacLeod is present. The services of this project could be used for promotional aspects of RECOSCIX. P. Reyniers will take contact with the coordinator of this project (Dr. T. Dickinson, Canada) to see what is possible here.

Finally, the e-mail connection with Mombasa was tested but failed. P. Reyniers will go into this problem later on. It is very important for the future link with IMS and especially WIOMSA that such a link will be created as soon as possible.

Sunday July 18th

Departure to Nairobi.

Monday July 19th

10 a.m. - 11.30 a.m.

MEETING WITH THE MINISTER OF RESEARCH, TECHNICAL TRAINING AND TECHNOLOGY (L. Egghe, H. Eisendrath, E. Okemwa and Ph. Polk).

All three project coordinators explained their activities to the permanent secretary (Prof. K. Mutahi), replacing the minister. Especially for the RECOSCIX-WIO project L. Egghe stressed the new evolutions in the project as described in this report. He asked special attention for the development of INTERNET in Kenya, and for the possible connection of this project with RECOSCIX-WIO. K. Mutahi expressed his gratitude on behalf of the Kenyan government for the activities in the Belgian projects. E. Okemwa agreed with this and drew the attention to the possibility of KMFRI to become a "centre of excellence", not only in itself, but also in the sense expressed by the Belgian ministry of development cooperation.

2 p.m. - 3.45 p.m.

MEETING AT THE BELGIAN EMBASSY (E. De Smet, L. Egghe, Ph. Polk, J. Tack, Y. Vermeulen, and for the Belgian embassy : M. Naessens-Vlieghe, representative of VVOB, G. Aertsen and Mr. Verleysen, head of the cooperation).

The results of both KBP and RECOSCIX-WIO were introduced. This was necessary, since Mr. Verleysen was new in his present position. Mr. Verleysen expressed his interest in the project but made a special point of the continuation of the projects, once the Belgian funding has stopped. He also advised to make the Kenyan authorities actively involved in these projects by e.g. implementing analogous services in the ministries (e.g. joint automation plans on the basis of CDS/ISIS).

4 p.m. - 5 p.m.

MEETING WITH S. OCHUODHO (U. NAIROBI)

A final meeting with this communication expert and two other interested parties (K. Braatane and R. Wandera) on INTERNET was held in the buildings of the University of Nairobi. S. Ochuodho informed L. Egghe and E. De Smet about the fact that now more partners are interested to become founding members of INTERNET. This is positive news, since then the price for each partner can drop. L. Egghe said that a price above $ 500 is out of the question for RECOSCIX-WIO and that even for this price one must be very critical on what we will receive for that. Therefore we asked S. Ochuodho to make a written proposal in full detail, that then can be studied (e.g. also in collaboration with IOC).

In the evening : departure for Brussels.

Tuesday July 20th

Arrival in Brussels.

CONCLUSIONS

1. The computers are bought, delivered and work well in RDC as well as in the CI's, apart from a piece of hardware for the RDC system. This must be solved in due course (contacts with ICL are already made).

2. The services of RECOSCIX-WIO are working well but should be increased for the CI's outside Kenya.

3. The organisation of INTERNET in Kenya should be followed up with great care.

4. The problem with the KMFRI librarian is solved in the sense that an appointment will be made of a highly qualified "senior librarian". As long as this vacancy is not filled, P. Reyniers will be "acting senior librarian".

5. P. Reyniers will be more active in the setting up of the library of KMFRI (jointly with the one of RECOSCIX-WIO). He is going to work in close connection with a new Kenyan information management specialist and, of course, with the senior librarian.

6. A PC will be purchased for Madagascar, as is foreseen by the project description.

7. Close collaboration will take place between RECOSCIX-WIO and WIOMSA and IOCINCWIO. In the starting phase priority will be given to electronic linkages between these organisations. Later on WIOMSA will take over the funding of RECOSCIX-WIO when the Belgian project comes to an end. WIOMSA is going to be recognised as a CI. Whether or not a PC must be purchased depends on the use that is made of the PC's that are already present in IMS.

8. WINDOW will have 4 issues per year. The next issue will be bilingual (English – French). From this issue, the necessity for further bilingual issues will be examined. In the future more scientific articles for WINDOW are not excluded. A donation of $ 15000 by SAREC has been noted.

9. A proposal for a second VVOB staff member, devoted to RECOSCIX-WIO, has been written (a communications manager). This proposal will be done to the VVOB. A written job description is going to be prepared. P. Reyniers will make a job description of his (modified) tasks and of the way how the KMFRI library must be reformed.

10. The idea of AI's has been formulated as being an institute that uses the RECOSCIX services but does not any input. It is determined that from now on all new institutes using RECOSCIX services will be considered as AI 's. Dependent on their activities and number of publications, they can then evoluate towards a CI.

11. RECOSCIX-WIO will be more promoted, possibly by making a video

movie of the project. For this, one will make contact with a
Canadian project, active on Zanzibar.

Provisional Report on the technical assistance visit to the RECOSCIX-project, Mombasa (Kenya), july 1993

dr. E. de Smet,
University of Antwerp

1. Aim of the visit

Following topics had been identified as target clues for technical assistance :
- 1.1 implementation of the CDS/ISIS-software package under UNIX
- 1.2 adaptation of the RECOSCIX-databases to the UNIX-version of CDS/ISIS
- 1.3 suggestions and comments on the database structures, their co-ordination and interrelations
- 1.4 preparation of telecommunications matters in view of an online connection to the RECOSCIX-databases
- 1.5 general training of the RECOSCIX-technical manager in the management of CDS/ISIS-UNIX and ISIS/Pascal programming

2. Short discussion on the activities

2.1 *ad 1.1 implementation of the CDS/ISIS-software package under UNIX*

Initial installation problems could be solved without delay : as with CDS/ISIS, DOS-version, most important is to put everything in its right place; with UNIX, the appropriate directory structure, including the 'ORE'-directory replacing the DOS-'SYS'-directory and containing the executable ISIS-file, is to be implemented very carefully. Also the use of a shell script, automatically resetting the terminal emulation (which is deregulated by the actual UNIX-beta release of CDS/ISIS and therefore needs the command 'sstty sane') after the use of ISIS, was implemented and explained to the local technical manager.
[In Annex a short report on topics to be addressed to, in installing CDS/ISIS for UNIX, is included on behalf of UNESCO and other interested parties.]
The RECOSCIX-UNIX installation needs further fine-tuning (as an example the BACKSPACE-key was defined) to make operations easier (e.g. use of PgDn a.s.o.).
The technical manager needs more training on this, as will most problably the ICL-people (!). A good reference manual, brought to the RECOSCIX-project to this end, was used and the use of it illustrated.

2.2 *ad 1.2 adaptation of the RECOSCIX-databases to the UNIX-version of CDS/ISIS*

The conversion of DOS-based CDS/ISIS parts (database, worksheets and other files) proved to be rather time consuming. All ASCII-files, including the FMT's, FST's, TAB's, STW- and ANY-files had to be converted to UNIX by dropping the line-feed character. The utility provided by UNESCO to this end (DOSCOPY) proved to be useful but not without faults.
After the succesfull conversion of the WIODIR-database and extensive testing and explanations, the RECOSCIX-technical manager is now considered to be capable of converting the other databases to UNIX without delay.
Special attention has gone to the adaptation of PASCAL-routines to UNIX. Filenames and -paths, as well as system calls (which proved to work happily), have to be taken into consideration. Printing in CDS/ISIS for UNIX causes a problem : the device name for the printer of a UNIX-

system (/dev/lp) is not accepted (i.e. automatically taken as a filename, capitalised (!) and joined after the actual path, e.g. /usr/isis//DEV/LP); therefore only printing to files (with succeeding printing of the file) is possible for now. UNESCO will be asked about this.

2.3 *ad 1.3 suggestions and comments on the database structures, their co-ordination and interrelations*

This topic could only be addressed partially, due to lack of time and the fact that the general manager of RECOSCIX was scarcely available for technical discussions during the visit.

The MIBIS-database-structure was studied shortly; many questions regarding its CCF-compatibility and optimalisation were raised. As an example one FST-line was changed, omitting unnecessary statements, resulting in - at first sight - the same results with gains in speed and transparancy. As a conclusion on this topic : the MIBIS-structure will have to be
carefully evaluated with respect to CCF-compatibility and used techniques. Of course, any introduction of changes on this should be made very carefully after plenty consideration.

2.4. *ad 1.4 preparation of telecommunications matters in view of an online connection to the RECOSCIX-databases*

The hardware needed for multi-user access form outside to the RECOSCIX-databases (a PAD-like device, manageing the streams of outgoing and incoming data) is still not available at site. Still more pressure should be put on ICL, the providers of RECOSCIX-hardware, in order to reach a quick solution on this. If necessary, ICL-UK will have to be contacted, since one of the problems is lack of skilled staff on these matters in Kenya. The local ICL-expert didn't show up at all during the stay in Mombasa (he was on duty in Nairobi), so these matters couldn't be discussed.
Access to the local workstations (the DOS-based 386-PC's) has been tested. The VT220-terminal emulation software for Windows, provided by ICL, proved to be much too slow for real life use (e.g. by the local inputters). After optimalisation of the Windows software (to have it operating in 386-mode after installing a more recent HIMEM.SYS) substantial gain in speed was obtained, this again being doubled after installing the Windows 3.1 version. After these succesful tests the terminal emulation was judged useable, however a non-Windows version still being preferrable for the workstations. These workstations have been upgraded to 4 MB RAM (except for 2, since the ICL's don't accept non-parity checking SIMM's).
With Dr. Ochuodho (University of Nairobi) the interest of RECOSCIX in taking part in a Internet-project for Kenya was discussed, first in a meeting in Mombasa, finally in a meeting with a few other interested parties in Nairobi. The position of RECOSCIX as stated by myself can be summarised as follows : the initiatives by Dr. Ochuodho should be sustained, since the introduction of Internet can be of very much interest to the RECOSCIX-telecommunications; initial costs will necessarily be high, until more partners, as expected, will join the project. Nevertheless, in view of the possibilities of RECOSCIX and other, larger funding partners, the RECOSCIX-funding will be limited, at most to the actual telecommunications cost of about US $ 500 p.m. Dr. Ochuodho now must prove to be able to really set up the project (i.e. including real engagements, funding and budgetting); until then RECOSCIX remains prepared to join the project and wants to be informed on all related initiatives.
In the meantime, a DOS-based BBS-software 'Frontdoor' has been installed and tested by Dr. Ochuodho on a RECOSCIX-PC, and a FIDONET-link with Nairobi has been implemented, to be used for email purposes.
A test in Zanzibar, to use the link from other RECOSCIX-partners, couldn't be worked out, because the local hardware (telephone- annex modem-line) was completely out of order : Hayes-compatible commands could be sent to the modem, but no modem-originated data could be received (the connecting cable was taken to Mombasa for further evaluation).

2.5 ad 1.5 general training of the RECOSCIX-technical manager in the management of CDS/ISIS-UNIX and ISIS/Pascal programming

Most of the preceeding topics already supposed a substantial component of training of the local technical manager, in the sence that all problems and solutions encountered needed extensive explanation and comments.

In addition to this, dedicated training was only partially given (due to lack of time again) to some PASCAL-programming techniques. The absence of index-consultation in the search-interface for RECOSCIX-databases needs special attention. A small example of browsing and menuing a list of terms, in the case of a database-selection menu, has been implemented for the DOS-version. Other items discussed : the general programming methods (e.g. the use of external text files instead of internal), the omission of unnecessary internal ISIS-data display on screen after the actual search command (which proved to be confusing indeed, as shown during a demo session with one of the guests at the RECOSCIX-dispatch centre).

One particular CDS/ISIS Version 3 item was also demonstrated and practised : the use of the database/record locking and unlocking (in case of unattented power failures e.g.) feature.

Finally, a new anti-virus software (F-PROT) was demonstrated and its use explained.

3. Follow-up

Following matters will be subject to further actions and evaluation :

3.1 the fine-tuning of the RECOSCIX-UNIX-system and the ability of the technical manager to take care of this himself;

3.2 controlling the correct and complete conversion of the RECOSCIX-databases and tools to UNIX;

3.3 discussion of the printing problem with UNESCO and instructions thereafter to the RECOS-CIX technical manager;

3.4 discussion of the MIBIS-structure with several experts and the preparation of a report with suggestions on adaptations;

3.5 insisting on a strong solution for the remaining hardware problems concerning telecommunications; if necessary, contacts with ICL-UK

3.6 study of alternatives for the Windows-based VT220-emulation software and possibly installation of such alternative software

3.7 acquisition of the 4 remaining MB's of RAM-SIMM's (with parity checking chips) and installation

3.8 following discussions and actions on the INTERNET-project of dr. Ochuodho

3.9 testing and reporting on the use of FIDONET

3.10 testing and reporting on the use of FIDONET from Zanzibar

3.11 elaboration of the RECOSCIX-user interface